AMENDMENT TO THE ABSTRACT

The following abstract will replace all prior versions of the abstract in the application:

A measuring system including a measuring device ~~(1)~~ with a laser tracker ~~(2)~~ and an opto-electronic sensor ~~(3)~~ having fixed positions relative to one another~~, a system computer~~ and an auxiliary measuring tool ~~(4)~~ with a reflector ~~(5)~~ and at least three light spots ~~(6)~~, is calibrated. ~~with the following calibration steps:~~ The auxiliary measuring tool ~~(4)~~ is rigidly coupled with an arrangement of auxiliary reflectors ~~(5')~~ and is moved around at least two different rotation axes. ~~In at least two rotation positions relative to each one of the at least two rotation axes, reflector (5)~~ Reflector and auxiliary reflectors ~~(5')~~ are registered by the laser tracker ~~(2)~~ and the light spots ~~(6)~~ are registered by the opto-electronic sensor ~~(3)~~. From the ~~measured~~ data of the laser tracker, ~~(2)~~ positions and orientations of the reflector arrangement relative to the laser tracker ~~(2)~~ and from the ~~measured~~ data of the opto-electronic sensor, ~~(3)~~ positions and orientations of the light spot arrangement relative to the opto-electronic sensor ~~(3)~~ are calculated and~~, from this,~~ the ~~at least~~ two rotation axes relative to the reflector arrangement and ~~relative to~~ the light spot arrangement are calculated. ~~Then calibration~~Calibration data are calculated by equating corresponding rotation axes. ~~For the measuring steps a calibration device (9) comprising a revolving table (11) and a wedge (12) installed on the table is used, wherein the auxiliary measuring tool (4) is mounted on the wedge (12) in two different orientations.~~